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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 16325-140PC	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US03/17825	International filing date (day/month/year) 04 June 2003 (04.06.2003)	Priority date (day/month/year) 04 June 2002 (04.06.2002)
International Patent Classification (IPC) or national classification and IPC IPC(7): G01N 33/566; A01N 38/18 and US Cl.: 436/501; 435/455; 514/2		
Applicant METABOLEX, INC.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>6</u> sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input checked="" type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 05 January 2004 (05.01.2004)	Date of completion of this report 20 September 2004 (20.09.2004)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Bradley L. Sisson Telephone No. (703) 308-0196 <i>Janice Ford</i> <i>for</i>	

Form PCT/IPEA/409 (cover sheet)(July 1998)

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/17825

**I. Basis of the report****1. With regard to the elements of the international application:\***

- ☒ the international application as originally filed.
- ☒ the description:  
pages 1-127 and 134-137 as originally filed  
pages 128-133, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.
- ☒ the claims:  
pages 138-140, as originally filed  
pages NONE, as amended (together with any statement) under Article 19  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.
- ☐ the drawings:  
pages NONE, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.
- ☒ the sequence listing part of the description:  
pages 1-161, as originally filed  
pages NONE, filed with the demand  
pages NONE, filed with the letter of \_\_\_\_\_.

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:**

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. ☐ The amendments have resulted in the cancellation of:**

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/fig NONE

**5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\***

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/17825

## III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The question whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

- ☒ the entire international application,  
☐ claims Nos. \_\_\_\_\_

because:

- ☐ the said international application, or the said claim Nos. \_\_\_\_\_ relate to the following subject matter which does not require international preliminary examination (*specify*):

- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_ are so unclear that no meaningful opinion could be formed (*specify*):

- ☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported by the description that no meaningful opinion could be formed.

- ☒ no international search report has been established for said claims Nos. 1-24

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

- ☐ the written form has not been furnished or does not comply with the standard.  
☒ the computer readable form has not been furnished or does not comply with the standard.

## SEQ ID NO:103 Human TRP-MET nucleic acid sequence

gi|187558|gb|J02958.1|

CDS:195..4421

GAATTCCGCCCTCGCCGCCCGCGGCCCGAGCGCTTTGTGAGCAGATGCGGAGCCGAGTGGAGGGCGCGAGCC  
AGATGCGGGGCGACAGCTGACTTGCTGAGAGGAGGCGGGGAGGCGCGGAGCGCGCGTGTGGTCTTGCGCCGCTG  
ACTTCTCCACTGGTTCTTGGGCACCGAAAGATAAACCTCTCATAATGAAGGCCCCCGCTGTGCTTGCACCTGGCA  
TCCTCGTGCTCCTGTTTACCTTGGTGAGAGGAGCAATGGGGAGTGTAAAGAGGCACTAGCAAAGTCCGAGATGA  
ATGTGAATATGAAGTATCAGCTTCCCAACTTCACCGCGGAAACACCCATCCAGAATGTCATTCTACATGAGCATC  
ACATTTTCTTGGTGCCACTAACTACATTTATGTTTTAAATGAGGAAGACCTTCAGAAGGTTGCTGAGTACAAGA  
CTGGGCCTGTGCTGGAACACCCAGATTGTTTCCCATGTCAGGACTGCAGCAGCAAAGCCAATTTATCAGGAGGTG  
TTTGAAAGATAACATCAACATGGCTCTAGTTGTGCGACCTACTATGATGATCAACTCATTAGCTGTGGCAGCG  
TCAACAGAGGGACCTGCCAGCGACATGTCTTTCCCAACAATCATACTGCTGACATACAGTCGGAGGTTCACTGCA  
TATTCTCCCCACAGATAGAAGAGCCAGCCAGTGTCTTGACTGTGTGGTGAGCGCCCTGGGAGCCAAAGTCCTTT  
CATCTGTAAAGGACCGGTTTCATCAACTTCTTTGTAGGCAATACCATAAATTCTTCTTATTTCCAGATCATCCAT  
TGCATTGATATCAGTGAGAAGGCTAAAGGAAACGAAAGATGGTTTTATGTTTTTGACGGACCAGTCTACATTG  
ATGTTTTACCTGAGTTCAGAGATTCTTACCCATTAAAGTATGTCCATGCCTTTGAAAGCAACAATTTTATTTACT  
TCTTGACGGTCCAAAGGGAACTCTAGATGCTCAGACTTTTCACACAAGAATAATCAGGTTCTGTTCCATAAACT  
CTGGATTGCATTCTACATGGAAATGCCTCTGGAGTGATTTCTCACAGAAAAGAGAAAAAAGAGATCCACAAAGA  
AGGAAGTGTTTAATATACTTCAGGCTGCGTATGTGAGCAAGCCTGGGGCCAGCTTGCTAGACAAATAGGAGCCA  
GCCTGAATGATGACATTCTTTTCGGGGTGTTTCGCACAAAGCAAGCCAGATTCTGCCGAACCAATGGATCGATCTG  
CCATGTGTGATTCCCTATCAAATATGTCAACGACTTCTTCAACAAGATCGTCAACAAAAACAATGTGAGATGTC  
TCCAGCATTTTTTACGGACCCAATCATGAGCACTGCTTTAATAGGACACTTCTGAGAAATTCATCAGGCTGTGAAG  
CGCGCCGTGATGAATATCGAACAGAGTTTACCACAGCTTTGCAGCGCGTTGACTTATTCATGGGTCAATTCAGCG  
AAGTCCTCTTAACATCTATATCCACCTTCATTAAAGGAGACCTCACCATAGCTAATCTTGGGACATCAGAGGGTC  
GCTTCATGCAGGTTGTGGTTTCTCGATCAGGACCATCAACCCCTCATGTGAATTTTCTCCTGGACTCCCATCCAG  
TGTCTCCAGAAGTGATTGTGGAGCATACATTAAACCAAAATGGCTACACACTGGTTATCACTGGGAAGAAGATCA  
CGAAGATCCCATTGAATGGCTTGGGCTGCAGACATTTCCAGTCCTGCAGTCAATGCCTCTCTGCCCCACCCTTTG  
TTCAGTGTGGCTGGTGCCACGACAAATGTGTGCGATCGGAGGAATGCCTGAGCGGGACATGGACTCAACAGATCT  
GTCTGCCTGCAATCTACAAGTTTTCCCAAATAGTGCACCCCTTGAAGGAGGGACAAGGCTGACCATATGTGGCT  
GGGACTTTGGATTTTCGGAGGAATAATAAATTTGATTTAAAGAAAACTAGAGTTCTCCTTGGAAATGAGAGCTGCA  
CCTTGACTTTAAGTGAGAGCACGATGAATACATTGAAATGCACAGTTGGTCCTGCCATGAATAAGCATTTCAATA  
TGTCCATAATTATTTCAAATGGCCACGGGACAACACAATACAGTACATTCTCCTATGTGGATCCTGTAATAACAA  
GTATTTGCGCGAAATACGGTCCATGGCTGGTGGCACTTTACTTACTTTAACTGGAAATTACCTAAACAGTGGGA  
ATTCTAGACACATTTCAATTGGTGGAAAAACATGTACTTTAAAAAGTGTGTCAAACAGTATCTTGAATGTTATA  
CCCCAGCCCAAACCATTTCAACTGAGTTTGTGTTAAATTGAAAATTGACTTAGCCAACCGAGAGACAAGCATCT  
TCAGTTACCGTGAAGATCCCATTGTCTATGAAATTCATCCAACCAAATCTTTTATTAGTACTTGGTGGAAAGAAC  
CTCTCAACATTGTGAGTTTTCTATTTTGCTTTGCCAGTGGTGGGAGCACAATAACAGGTGTTGGGAAAAACCTGA  
ATTGAGTTAGTGTCCCAGAAATGGTCATAAATGTGCATGAAGCAGGAAGGAACCTTTACAGTGGCATGTCAACATC  
GCTCTAATTCAGAGATAATCTGTTGTACCACTCCTTCCCTGCAACAGCTGAATCTGCAACTCCCCCTGAAAACCA  
AAGCCTTTTTTCATGTTAGATGGGATCCTTTCCAAATACTTTGATCTCATTTATGTACATAATCCTGTGTTTAAAGC  
CTTTTGAAAGCCAGTGATGATCTCAATGGGCAATGAAAATGTACTGGAAATTAAGGGAAATGATATTGACCCTG

AAGCAGTTAAAGGTGAAGTGTAAAAAGTTGGAAATAAGAGCTGTGAGAATATACACTTACATTCTGAAGCCGTTT  
TATGCACGGTCCCCAATGACCTGCTGAAATTGAACAGCGAGCTAAATATAGAGTGAAGCAAGCAATTTCTTCAA  
CCGTCTTTGGAAAAGTAATAGTTCAACCAGATCAGAAATTCACAGGATTGATTGCTGGTGTGTCTCAATATCAA  
CAGCACTGTTATTACTACTTGGGTTTTTCTGTGGCTGAAAAGAGAAAGCAAATTAAAGATCTGGGCAGTGAAT  
TAGTTGCTACGATGCAAGAGTACACACTCCTCATTGGATAGGCTTGTAAGTGCCCGAAGTGTAAAGCCCACTA  
CAGAAATGGTTTTCAAATGAATCTGTAGACTACCGAGCTACTTTTCCAGAAGATCAGTTTCTTAATTCATCTCAGA  
ACGGTTCATGCCGACAAGTGCAGTATCCTCTGACAGACATGTCCCCCATCCTAACTAGTGGGGACTCTGATATAT  
CCAGTCCATTACTGCAAAATACTGTCCACATTGACCTCAGTGCTCTAAATCCAGAGCTGGTCCAGGCAGTGCAGC  
ATGTAGTGATTGGGCCCAGTAGCCTGATTGTGCATTTCAATGAAGTCATAGGAAGAGGGCATTTTGGTTGTGTAT  
ATCATGGGACTTTGTTGGACAATGATGGCAAGAAAATTCAGTGTGCTGTGAAATCCTTGAACAGAATCACTGACA  
TAGGAGAAGTTTCCCAATTTCTGACCGAGGGAATCATCATGAAAGATTTTAGTCATCCCAATGTCCTCTCGCTCC  
TGGGAATCTGCCTGCGAAGTGAAGGGTCTCCGCTGGTGGTCTTACCATACATGAAACATGGAGATCTTCGAAATT  
TCATTGCAAAATGAGACTCATAATCCAAGTGTAAAGATCTTATTGGCTTTGGTCTTCAAGTAGCCAAAGCGATGA  
AATATCTTGCAAGCAAAAAGTTTGTCCACAGAGACTTGGCTGCAAGAACTGTATGCTGGATGAAAAATTCACAG  
TCAAGGTTGCTGATTTTGGTCTTGCCAGAGACATGTATGATAAAGAATACTATAGTGTACACAACAAACAGGTG  
CAAAGCTGCCAGTGAAGTGGATGGCTTTGGAAAGTCTGCAAACTCAAAGTTTACCACCAAGTCAGATGTGTGGT  
CCTTTGGCGTCGTCCTCTGGGAGCTGATGACAAGAGGAGCCCCACCTTATCCTGACGTAAACACCTTTGATATAA  
CTGTTTACTTGTGCAAGGGAGAAGACTCCTACAACCCGAATACTGCCAGACCCCTTATATGAAGTAATGCTAA  
AATGCTGGCACCCCTAAAGCCGAAATGCGCCCATCTTTTCTGAACTGGTGTCCCGGATATCAGCGATCTTCTCTA  
CTTTCATTGGGGAGCACTATGTCCATGTGAACGCTACTTATGTGAACGTAAAATGTGTGCTCGCTCCGTATCCTTCTC  
TGTTGTATCAGAAAGATAACGCTGATGATGAGGTGGACACACGACCAGCCTCCTTCTGGGAGACATCATAGTGCT  
AGTACTATGTCAAAGCAACAGTCCACACTTTGTCCAATGGTTTTTTTCACTGCCTGACCTTTAAAAGGCCATCGAT  
ATTCTTTGCTCCTTGCCATAGGACTTGTATTGTTATTTAAATTACTGGATTCTAAGGAATTTCTTATCTGACAGA  
GCATCAGAACCAGAGGCTTGGTCCCACAGGCCAGGGACCAATGCGCTGCAG

**SEQ ID NO:104 Human TRP-MET polypeptide sequence**

gi|307196|gb|AAA59591.1|

MKAPAVLAPGILVLLFTLVQRSNGECKEALAKSEMNVNMKYQLPNFTAETPIQNVILHEHHIFLGATNYIYVLNE  
EDLQKVAEYKTGPVLEHPDCFPQCDCSSKANLSGGVWKDNINMALVVDYDDQLISCGSVNRGTCQRHVFPHNH  
TADIQSEVHCIFSPQIEEPSQCPDCVVSALGAKVLSSVKDRFINFFVGNTINSSYFPDHPHLSISVRRLKETKD  
FMFLTDQSYIDVLPEFRDSYPIKYVHAFESNNFIYFLTVQRETLDQTFHTRIIRFCSINSGLHSEMPLECIL  
TEKRKKRSTKKEVFNILQAAYVSKPGAQLARQIGASLNDLILFGVFAQSKPDSAEPMDRSAMCAFPKIYVNDFFN  
KIVNKNVRLQHFYGPNEHCNRTLLRNSSGCEARRDEYRTEFTALQRVDLFMGQFSEVLLTSISTFIKGD  
TIANLGTSEGRFMQVVVSRSGPSTPHVNFLLDSDHPVSPEVIVEHTLNQNGYTLVITGKKITKIPLNGLGCRHFQS  
CSQCLSAPPFVQCGWCHDKCVRSEECLSGTWTQQICLPAIYKVPNSAPLEGGTRLTICGWDFGFRNNKFDLKK  
TRVLLGNESCTLTLSSESTMTNLKCTVGPAMNKHFNMSIIISNGHGTQYSTFSYVDPVITSISPKYGPMAAGTLL  
TLTGNYLNSGNSRHISIGGKCTCLKSVNSILECYTPAQTISTEFAVKLKIDLANRETSIFSYPREDPIVYEIHPT  
KSFISTWWKEPLNIVSFLFCFASGGSTITGVGKNLNSVSPRMVINVHEAGRNFTVACQHRNSSEIICCTTPSLQ  
QLNLQLPLKTKAFFMLDGLSKYFDLIYVHNPVFKPFKPMISMGNENVLEIKGNDIDPEAVKGEVLKVGKNSC  
ENIHLHSEAVLCTVPNDLLKLNSELNIEWKQAISSTVLGKIVIQPDQNFGLIAGVVSISTALLLLLGFFLWLKK

PET40503.17825.05012004

RKQIKDLGSELVRYDARVHTPHLDRLVSARSVSPTTEMVSNESVDYRATFPEDQFPNSSQNGSCRQVQYPLTDMSPILTS  
GSDSDISSPLLQNTVHIDLSALNPELVQAVQHVVIGPSSLI VHFNEVIGRGHFGCVYHGTLDDNDGKKIHC  
AVKSLNRITDIGEVSQFLTEGIIMKDFSHPNVLSLLGICLRSEGSPLVVL P YMKHGD L RNFIRNETHNPTVKDLI  
GFG LQVAKAMKY LASKKFVHRDLAARN CMLDEKFTVKVADFLARDMYDKEYYSVHNKTGAKLPVKWMALES LQT  
QKFTTKSDVWSFGVVLWELMTRGAPPYPDVNTFDITVYLLQGRLLQPEYCPDPLYEVM LK C WHPKAEMRPSFSE  
LVS RISAIFSTFIGEHYVHV NATYVNVKCVAPYPSLLSSEDNADDEVDTRPASFWETS

**SEQ ID NO:105 Mouse TRP-MET nucleic acid sequence**

gi|6678867|ref|NM\_008591.1|

CDS:1..4140

ATGAAGGCTCCCACCGTGCTGGCACCTGGCATTCTGGTGCTGCTGTTGTCCTTGGTGCAGAGGAGCCATGGGGAG  
TGCAAGGAGGCCCTAGTGAAGTCTGAGATGAACGTGAACATGAAGTATCAGTCCCCAACCTTCACGGCAGAAACC  
CCCATCCAGAATGTCGTCCTACACGGCCATCATATTTATCTCGGAGCCACAACTACATTTATGTTTTAAATGAC  
AAAGACCTTCAGAAGGTATCCGAATTCAAGACCGGGCCCGTGTGGAAACACCCAGATTGTTTACCTTGTCGGGAC  
TGCAGCAGCAAAGCCAATTCATCAGGAGGGGTGTTGGAAAGACAACATCAACATGGCTCTGCTTGTTGACACATAC  
TATGATGATCAACTCATTAGCTGTGGCAGTGTCAACAGAGGGACTTGCCAGCGGCATGTCCTTCCTCCTGACAAT  
TCTGCTGACATCCAGTCTGAGGTCCACTGCATGTTCTCCCCAGAAGAGGAGTCAGGGCAGTGTCTGACTGTGTA  
GTGAGTGCCCTCGGAGCCAAAGTCTCCTGTGCGAAAGGACCGGTTTCATCAATTTCTTTGTGGGGAATACGATC  
AATTCCTCCTATCCTCCTGGTTATTCACTGCATTCGATATCGGTGAGACGGCTGAAGGAAACCCAAGATGGTTTT  
AAGTTTTTGACAGACCAGTCTATATTGATGTCTTACCAGAATTCCTTGATTCTACCCCATAAAGTACATACAT  
GCCTTCGAAAGCAACCATTTTATTTACTTTCTGACTGTCCAAAGGAACTCTAGATGCTCAGACTTTTCATACA  
AGAATAATCAGGTTCTGTTCCGTAGACTCTGGGTGCACTCCTACATGGAAATGCCCCTGGAATGCATCCTGACA  
GAAAAAAGAAGGAAGAGATCCACAAGGGAAGAAGTGTTTAATATCCTCCAAGCCGCGTATGTGAGTAAACCAGGG  
GCCAATCTTGCTAAGCAAATAGGAGCTAGCCCTTCTGATGACATTCTCTTCGGGGTGTTTGACAAAGCAAGCCA  
GATTCTGCTGAACCTGTGAATCGATCAGCAGTCTGTGCATTCCCCATCAAATATGTCAATGACTTCTTCAACAAG  
ATTGTCAACAAAAACAACGTGAGATGTCTCCAGCATTTTTTACGGACCCAACCATGAGCACTGTTTCAATAGGACC  
CTGCTGAGAACTCTTCGGGCTGTGAAGCGCGCAGTGACGAGTATCGGACAGAGTTTACCACGGCTTTGACGCGC  
GTCGACTTATTCATGGGCCGGCTTAACCAAGTGCTCCTGACATCCATCTCCACCTTCATCAAAGGTGACCTCACC  
ATTGCTAATCTAGGGACGTGAGAAGGTGCTTCATGCAGGTGGTGCTCTCTCGAACAGCACACCTCACTCCTCAT  
GTGAACTTCCTCCTGGACTCCCATCCTGTATCTCCAGAAGTTATTGTTGAGCATCCATCAAATCAAATGGCTAT  
ACATTGGTTGTCACAGGAAAGAAGATCACCAAGATTCCATTGAATGGCCTGGGCTGTGGACATTTCCAATCCTGC  
AGTCAGTGCCCTCTGCCCCCTTACTTTATACAGTGTGGCTGGTGCCACAATCAATGTGTGCGTTTTGATGAATGC  
CCCAGCGGTACATGGACTCAAGAGATCTGTCTGCCAGCGGTTTATAAGGTGTTCCCCACCAGCGCGCCCCCTTGAA  
GGAGGAACAGTGTTGACCATATGTGGCTGGGACTTTGGATTGAGGAAGAATAATAAATTTGATTTAAGGAAAACC  
AAAGTTCTGCTTGGAACGAGAGCTGTACCTTGACCTTAAGCGAGAGCAGCAGCAAATACGTTGAAATGCACAGTT  
GGTCCCGCGATGAGTGAGCACTTCAATGTGTCTGTAATTATCTCAAACAGTCGAGAGACAACAATACAGTGCA  
TTCTCCTATGTAGATCCTGTAATAACAAGCATTTCTCCGAGGTACGGCCCTCAGGCTGGAGGCACCTTACTCACT  
CTTACTGGGAAATACCTCAACAGTGGAATTCTAGACACATTTCAATTGGAGGGAAACATGTACTTTAAAAAGT  
GTATCAGATAGTATTCTTGAATGCTACACCCAGCCCAAACCTACCTCTGATGAGTTTCTGTGAAATTGAAGATT  
GACTTGGCTAACCAGAGAGACCAGCAGCTTCAGTTACCGGAAGACCCCGTTGTCTATGAAATCCACCCAAACCAA  
TCTTTTATTAGTGGTGGAAGCACAAATAACGGGTATTGGGAAGACCCTGAATTCGGTTAGCCTCCCAAAGCTGGTA

ATAGATGTGCATGAAGTGGGTGTGAACACAGTGGCATGTCAGCATCGCTCAAATTCAGAGATCATCTGCTGC  
ACTACTCCTTCACTGAAACAGCTGGGCCTGCAACTCCCCCTGAAGACCAAAGCCTTCTTCCTGTTAGACGGGATT  
CTTTCCAAACACTTTGATCTCACTTATGTGCATAATCCTGTGTTTGAGCCCTTTTGAAAAGCCAGTAATGATCTCA  
ATGGGCAATGAAAATGTAGTGGAAATTAAGGGAAACAATATTGACCCCTGAAGCAGTTAAAGGTGAAGTGTTAAAA  
GTTGGAAATCAGAGCTGCGAGAGTCTCCACTGGCACTCTGGAGCTGTGTTGTGTACAGTCCCCAGTGACCTGCTC  
AAACTGAACAGCGAGCTAAATATAGAGTGGAAAGCAAGCAGTCTCTTCAACTGTTCTTGGAAGGTGATCGTTCAA  
CCGGATCAGAATTTTGCAGGATTGATCATTGGTGGGTCTCAATATCAGTAGTAGTTTTGTTATTATCCGGGCTC  
TTCTGTGGATGAGAAAGAGAAAGCATAAAGATCTGGGCAGTGAATTAGTTTCGCTATGACGCAAGAGTACACACT  
CCTCATTGGATAGGCTTGTAAGTGCCCGAAGTGTAAGTCCAACACTACAGAGATGGTTTTCAAATGAGTCTGTAGAC  
TACAGAGCTACTTTTCCAGAAGACCAGTTTCCCAACTCCTCTCAGAAATGGAGCATGCAGACAAGTGCAATATCCT  
CTGACAGACCTGTCCCCTATCCTGACGAGTGGAGACTCTGATATATCCAGCCCATTACTACAAAATACTGTTTAC  
ATTGACCTCAGTGCTCTAAATCCAGAGCTGGTCCAAGCAGTTCAGCACGTAGTGATTGGACCCAGCAGCTGATT  
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AAGAAAATTCAGTGTGCTGTGAAATCCTTGAATAGAATCACAGATATAGAAGAGGTCTCCAGTTTCTGACTGAG  
GGAATCATCATGAAAGACTTCAGCCATCCCAATGTTCTCTCACTCTTGGAATCTGCTGAGGAGTGAAGGGTCT  
CCTCTGGTGGTCTGCCCCTATATGAAGCATGGAGATCTGCGAAATTTCAATCGAAACGAGACTCATAATCCAAC  
GTGAAAGATCTTATAGGATTTGGCCTTCAAGTAGCCAAAGGCATGAAATATCTTGCCAGCAAAAAGTTTGTCCAC  
AGAGACTTAGCTGCAAGAACTGCATGTTGGATGAAAATTCAGTGTCAAGGTTGCTGATTTGGTCTTGCCAGA  
GACATGTACGATAAAGAGTACTATAGTGTCCACAACAAGACGGGTGCCAAGCTACCAGTAAAGTGGATGGCTTTA  
GAGAGTCTGCAAACGCAGAAAGTTCACCACCAAGTCAGATGTGTGGTCTTTGGTGTGCTCCTCTGGGAGCTCATG  
ACGAGAGGAGCCCCTCCTTATCCCCGACGTGAACACATTTGATATCACTATCTACCTGTTGCAAGGCAGAAGACTC  
TTGCAACCAGAATACTGTCCAGACGCCTTGACGAAGTGATGCTAAAATGCTGGCACCCCAAAGCGGAAATGCGC  
CCGTCCTTTTCCGAACCTGGTCTCCAGGATATCCTCAATCTTCTCCACGTTTCAATGGGGAACTACGTCCACGTG  
AACGCTACTTATGTGAATGTAAATGTGTTGCTCCATATCCTTCTCTGTGTCATCCCAAGACAACATTGATGGC  
GAGGGGAACACATGA

**SEQ ID NO:106 Mouse TRP-MET polypeptide sequence**

gi|6678868|ref|NP\_032617.1|

MKAPTVLAPGILVLLLSLVQRSHGECKEALVKSEMNVMKYQLPNFTAETPIQNVVLHGHHIYLGATNYIYVLND  
KDLQKVSEFKTGVPVLEHPDCLPCRDCSSKANSSGGVWKNINMALLVDITYDDQLISCGSVNRGTCQRHVLPPDN  
SADIQSEVHCFMFSPEEESGQCPDCVVSALGAKVLLSEKDRFINFFVGNTINSSYPGYSLSHSISVRRLKETQDGF  
KFLTDQSYIDVLPEFLDSYPIKYIHAFESNHFYFLTVQKETLDAQTFHTRIIRFCSVDSGLHSYMEMPLECILT  
EKRRKRSTREEVFNILQAAYVSKPGANLAKQIGASPSDDILFGVFAQSKPDSAEPVNRSAVCAFPKIKYVNDFFNK  
IVNKNMVRCLQHFYGPNEHCFNRLLRNSSGCEARSDEYRTEFTTALQRVDLFMGRNLNQVLLTSISTFIKGLT  
IANLGTSEGRFMQVVLRSRTAHLTPHVNFLLDSDHPVSPEVIVEHPSNQNGYTLVVTGKKITKIPLNGLGCGHFQSC  
SQCLSAFYFIQCGWCHNQCVRFDECPSTWTQEIPLPAVYKVFPSTAPLEGGTVLTICGWDFGRKNNKFDLRKT  
KVLLGNESCTLTLESTTNTLKCTVGPAMSEHFNVSIIISNSRETTQYSAFSYVDPVITSISPRYGPQAGGTLT  
LTGKYLNSGNSRHISIGGKTCTLKSVDSEILECYTPAQTSTDEFVVKLKIDLANRETSSFSYREDPVVYIEHPTK  
SFISGGSTITGIGKTLNSVSLPKLVIDVHEVGNYTVACQHRNSSEIICCTTPSLKQLGLQLPLKTKAFFLLDGI  
LSKHFDLTYVHNPVFEPFEKPMISMGNENVVEIKGNNIDPEAVKGEVLKVGNNQSCESLHWHSGAVLCTVPSDLL

KLNSELNIEWKQAVSSTVLGKVIVQPDQNFAGLIIGAVSISVVVLLLSGLFLWMRKRKHKDLGSELVRYDARVHT  
PHLDRLVSARSVSPTTEMVSNESVDYRATFPEDQFPNSSQNGACRQVQYPLTDLSPILTSGDSDISSPLLQNTVH  
IDLSALNPELVQAVQHVVIGPSSLIVHFNEVIGRGHFGCVYHGTLLDNDGKKIHCAVKSLNRITDIEEVSQFLTE  
GIIMKDFSHPNVLSLLGICLRSEGSPLVVLVPMKHGDLRNFIRNETHNPTVKDLIGFGLQVAKGMKYLASKKFVH  
RDLAARNCMLDEKFTVKVADFGFLARDMYDKEYYSVHNKTGAKLPVKWMALESLOTQKFTTKSDVWSFGVLLWELM  
TRGAPPYPDVNTFDITIIYLLQGRLLQPEYCPDALYEVMLKCWHPKAEMRPSFSELVSRISIFSTFIGEHYVHV  
NATYVNVKCVAPYPSLLPSQDNIDGEGNT

**SEQ ID NO:107 Rat TRP-MET nucleic acid sequence**

gi|13928699|ref|NM\_031517.1|

ATGAAGGCTCCCACCGCGCTGGCACCTGGCATTCTGCTGCTGCTGCTGACCTTGGCGCAGAGGAGCCATGGGGAG  
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